

Spiders from Some Pacific Islands, Part V

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A COLLECTION OF SPIDERS from various Pacific islands was entrusted to me for examination by the Director of the Bernice P. Bishop Museum in Honolulu, to whom I am indebted. There were 146 tubes, mostly containing a number of specimens, and they had been collected by different people at different times from islands between New Caledonia in the west and Tahiti in the east. Five new species are described and also four allotypes, and a number of additions to faunal lists have been made. The islands, or island groups, will be mentioned in alphabetical order, and the descriptions given at the end. Unless otherwise stated the specimens are in the Bernice P. Bishop Museum.

AITUTAKI

Aitutaki is an island, partly volcanic and partly of coral, lying 140 miles north of Rarotonga. It has 6 square miles. Twenty-four species have been recorded and the present collection adds three more. *Smeringopus pallidus* (Blackwall) (formerly *S. elongatus* Vinson) has a very widespread distribution and has been recorded in Samoa and in Rarotonga and the Northern Cook Islands. *Chiracanthium longimanum* L. Koch has previously been recorded only as far east as Tonga and Samoa. The third new record is a salticid here described as *Flacilla krausi* n. sp.

LINE ISLANDS

These are very isolated atolls situated more or less on the equator, east of the Gilbert Islands and north of the Tokelau Islands. The fauna of such islands is of course poor in the extreme, and consists for the most part of species accidentally introduced by man. This was well shown by Sakagami (1961) for Marcus Island,

which lies in a very isolated position to the northeast of the Mariana Islands. In 1902 only one spider species was present, while in 1961 there were four: a pholcid, an epeirid, a salticid, and *Heteropoda venatoria*. In the present collection 15 species were present from six islands, and six of these have been left unidentified. It was felt that they may have been introduced from anywhere and are not part of the normal Pacific fauna. To describe them as new would only tend to cause confusion. Table 1 shows the distribution of the species between the islands.

NEW CALEDONIA

About 150 species have been recorded from New Caledonia, many of them not extending into the more easterly islands but no doubt having a wider distribution towards the northwest. In the present collection 14 species have been identified, all but two of which have been recorded previously. The two new records are *Prychia gracilis* L. Koch, previously known from New Hebrides and Fiji, and *Poecilopachys bispinosa* (Keyserling) (formerly *Cyrtarachne*), known from New Hebrides and Samoa.

SAMOA

The spider fauna of Upolu is probably as well known as that of any of the Pacific islands. The larger island of Savaii to the west, and the smaller Tutuila to the east, are less well known. However, as their distances from Upolu are only 8 and 47 miles respectively, their faunae are probably very similar. All are large, mountainous, volcanic islands.

In 1955 I published a list of the spiders of Upolu, including 123 species. Since then six have been added: *Drassodes ciusi* Berland, *Clubiona upoluensis* n. sp., *Euryattus lautus* Keyserling, *Trite longipalpis* Marples, *Leucauge granulata* Walckenaer, and *Epeira pogisa* Marples. *Tetrablemma samoensis* n. sp., recorded in 1955

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TABLE 1
DISTRIBUTION OF SPIDERS IN THE LINE ISLANDS

	HOWLAND	BAKER	CANTON	JARVIS	PALMYRA	FANNING
<i>Filistata bakeri</i>			×			
<i>Scytodes striatipes</i>		×	×	×		
Clubionid.....				×		
<i>Heteropoda</i> sp.....						×
<i>Menemerus bivittatus</i>				×		
<i>Plexippus payculli</i>	×	×	×	×		
Salticid.....				×		
<i>Thorellia ensifera</i>		×				
<i>Lycosa tongatabuensis</i>	×	×				
<i>Latrodectes geometricus</i>			×			
Theridiid.....					×	
Linyphiid.....					×	
<i>Epeira theisi</i>		×	×	×		
Epeirid.....			×			
Epeirid.....					×	

from an incomplete specimen, is here described fully. Thirty-five species are recorded from Savaii and 34 from Tutuila, these being listed below, and the total for the Samoan Group is now 136.

SOCIETY ISLANDS

Forty species have been recorded from the Society Islands. The present collection includes 12 species, mostly from Tahiti, and two of them are new records for the group. These are both clubionids, *Australaena bistricina* Berland, previously recorded from Rapa, and *Chiracanthium gilvum* L. Koch, previously recorded from New Caledonia and Samoa.

SWAINS ISLAND

This is a small island situated between Samoa and the Tokelau Islands to the north. No spiders seem to have been recorded from it before, but the collection includes four species. Two of them are very widespread species, *Thorellia ensifera* Thorell and *Epeira theisi* Walckenaer. *Ceruleocera ransfordi* Marples, recorded from Upolu, Samoa, is surprising, as its habitat there is under stones in rather moist situations. The fourth species is an agelenid, described below as a new genus and species.

TONGA

New records are *Uloborus gibbosus* L. Koch from Nukualofa, previously recorded from New

Hebrides, Fiji, Samoa, and Tokelau, and *Theridion albidum* Berland from Vavau, previously recorded from Samoa. It had seemed curious that no uloborids were known from Tonga; this is the first of the genus. The total number of species for Tonga is now 51.

TETRABLEMMIDAE

Tetrablemma samoensis n. sp.

Malololelei Rd. Upolu, Samoa. Collected by E. C. Zimmerman vii-9-40.

MALE: Length 1.16 mm. Bright chestnut brown, legs a little paler.

CARAPACE: Length 0.52 mm, breadth 0.23 mm. Outline from above pear-shaped, widest opposite leg II, rounded in front and behind. Profile rises steeply to the apex opposite leg I, where the eyes are situated.

Eyes: Four, white, central area of the group black. Ratios of the diameters of the eyes and of their distances apart: AE, 65; PE, 56; A-A, 0; A-P, 0; P-P, 40. Width of the eye-group 0.09 mm; clypeus 0.25 mm.

Chelicerae: Stout, with a large, anteriorly directed, upward-curving horn arising near the base. Ventral end of the retromargin of the groove with a large sharp angle.

Maxillae: Sharply inclined inwards, the scopulae meeting in front of the lip.

TABLE 2

LIST OF THE SPIDERS KNOWN FROM THE SAMOAN ISLANDS OF SAVAII AND TUTUILA

	Savaii	Tutuila
<i>Filistata bakeri</i> Berland.....	×	
<i>Uloborus bistriatus</i> L. Koch.....	×	
<i>Uloborus geniculatus</i> Olivier.....	×	
<i>Uloborus gibbosus</i> L. Koch.....	×	×
<i>Dictyna bifasciata</i> L. Koch.....	×	×
<i>Loxosceles rufescens</i> L. Doufour.....	×	
<i>Scytodes striatipes</i> (L. Koch).....	×	×
<i>Artema mauriciana</i> Walckenaer.....	×	
<i>Pholcus ancoralis</i> L. Koch.....	×	×
<i>Physocyclus globosus</i> Taczanowski.....		×
<i>Smeringopus pallidus</i> (Blackwall).....	×	
<i>Chiracanthium furax</i> L. Koch.....		×
<i>Clubiona alveolata</i> L. Koch.....		×
<i>Clubiona samoensis</i> Berland.....		×
<i>Clubiona zimmermani</i> n. sp.....		×
<i>Heteropoda venatoria</i> Linn.....	×	
<i>Diaea praetexta</i> L. Koch.....	×	×
<i>Athamas whitmeei</i> Cambridge.....	×	×
<i>Ascyltus pterygodes</i> L. Koch.....	×	×
<i>Bavia aericeps</i> E. Simon.....	×	×
<i>Bianor maculatus</i> Keyserling.....	×	
<i>Cytaea piscula</i> L. Koch.....	×	×
<i>Flacilla minuta</i> Berland.....	×	
<i>Menemerus bivittatus</i> Dufour.....		×
<i>Mollicia microphthalma</i> L. Koch.....		×
<i>Mollicia pusilla</i> Strand.....		×
<i>Plexippus payculli</i> Audouin.....		×
<i>Savaia punctata</i> Marples.....	×	
<i>Thorellia ensifera</i> Thorell.....	×	×
<i>Habnia berlandi</i> Marples.....		×
<i>Argyrodes cometes</i> L. Koch.....		×
<i>Argyrodes gracilis</i> L. Koch.....	×	×
<i>Cylognatha affinis</i> Berland.....	×	×
<i>Mysmena rotunda</i> (Marples).....	×	
<i>Phoroncidia personata</i> (L. Koch).....		×
<i>Theridion adamsoni</i> Berland.....		×
<i>Theridion albostriatum</i> L. Koch.....		×
<i>Theridion aleipata</i> Marples.....	×	
<i>Theridion buxtoni</i> Berland.....	×	
<i>Theridion hopkinsi</i> Berland.....		×
<i>Linyphia tuasivia</i> Marples.....	×	
<i>Leucauge ilatele</i> Marples.....	×	
<i>Leucauge tuberculata</i> Keyserling.....	×	×
<i>Leucauge prodiga</i> L. Koch.....	×	
<i>Tetragnatha macilentia</i> L. Koch.....	×	
<i>Tetragnatha panopea</i> L. Koch.....	×	
<i>Anepision rhomboides</i> (L. Koch).....	×	×
<i>Cyclosa littoralis</i> L. Koch.....	×	×
<i>Cyrtophora moluccensis</i> Doleschall.....		×
<i>Epeira maculaticeps</i> L. Koch.....		×
<i>Epeira pogisa</i> Marples.....		×
<i>Epeira theisi</i> Walckenaer.....	×	×
<i>Poecilopachys bispinosa</i> (Keyserling).....		×
<i>Theridiosoma lopedelli</i> Marples.....		×

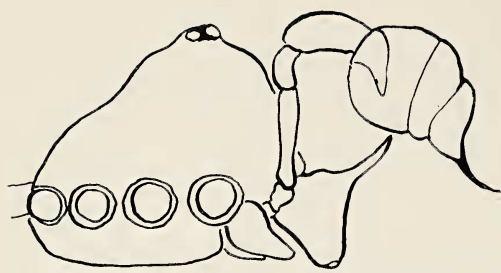


FIG. 1. *Tetrablemma samoensis*. Right side of the prosoma with legs removed.

Lip: Free, much wider than long.

Sternum: Length 0.31 mm, breadth 0.34 mm, convex. Prolonged upwards between the bases of the legs. Hind legs widely separated.

Palp: Long, tibia stout, tarsus large, smooth and pear-shaped with an upcurved spine at the tip. As in Figure 1.

Legs:	I	IV	II	III	Palp
	2.2	2.0	1.9	1.8	1.3

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.23	0.20	....	0.27	0.70
I	0.38	0.39	0.20	0.22	1.19
II	0.32	0.31	0.17	0.20	1.00
III	0.28	0.30	0.17	0.20	0.95
IV	0.36	0.32	0.19	0.17	1.04
Tibial Index I	4.6		Tibial Index IV	5.3	

Three claws. Tarsi with serrated bristles. Metatarsi with one and tibiae with three dorsal trichobothria. No spines.

Abdomen: Length 0.75 mm, breadth 0.63 mm. Large dorsal and ventral sclerites. Spinnerets surrounded by a conical sclerite. Each side of the abdomen with three long narrow sclerites, and three similar ones between the dorsal sclerite and that surrounding the spinnerets. Two broader ones in the corresponding space below.

FEMALE: Length 1.18 mm. Color as in male.

Carapace: Length 0.56 mm, breadth 0.42 mm. While in the male the carapace in side view is conical, with the eye-group at the apex, in the

female the eye-group is more anteriorly placed, so that the carapace has a horizontal dorsal ridge.

Eyes: Ratios of the diameters of the eyes and of their distances apart: AE, 56; PE, 64; A-A, 17; A-P, 0; P-P, 41. Width of eye-group 0.11 mm. Clypeus 0.16 mm.

Chelicerae: Without the anterior horns.

Maxillae and lip: As in male.

Sternum: Length 0.31 mm, breadth 0.34 mm.

Palp: Short and slender. No claw.

Legs:	IV	I	II	III	Palp
	2.1	2.0	1.8	1.7	0.5

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.12	0.12	....	0.06	0.70
I	0.42	0.39	0.18	0.19	1.18
II	0.38	0.32	0.19	0.19	1.08
III	0.31	0.32	0.16	0.20	0.99
IV	0.36	0.41	0.22	0.22	1.21
Tibial Index I	4.5		Tibial Index IV	5.6	

Abdomen: Length 0.82 mm, breadth 0.61 mm. As in the male. Strong transverse fold near the posterior margin of the large ventral sclerite.

The family Tetrablemmidae was erected by Cambridge (1873) for a single male *T. medio-oculatum* from Ceylon. The present male differs from this in the carapace, there being no prominence bearing small points anterior to the eyes, nor any row of prominent points round the margin. The shape of the horns on the chelicerae and of the palpal organ also appear somewhat different. Another species, *T. okei*, was described by Butler (1922) from a female from Victoria, Australia. The shape of the carapace is slightly different but, otherwise, except for the presence of trichobothria in the present specimen, they are very similar. Because of these differences and the great geographical separation, a new species is established.

AGELENIDAE

A single male, collected by E. C. Zimmerman viii-20-40 on Swains Island, appears to belong to the Agelenidae. This family is most unusual in the Pacific, and the only species attributed to

it, *Paro simoni* Berland from Rapa, may actually be a linyphiid. The present specimen may have been accidentally introduced to Swains Island from some other part of the world, as suggested above for the specimens from the Line Islands. As the island is not so isolated, and the other three species are found also in Samoa, the present specimen is described as *Swainsai armata* gen. et sp. nov.

Swainsia armata gen. et sp. nov.

MALE: Swains Island. Length 3.72 mm. General color pale brown, the chelicerae and cephalic part of the carapace being darker, the abdomen lighter. Black around the eyes and between AME and LE.

Carapace: Length 1.87 mm, breadth 1.38 mm. Cephalic part parallel-sided, posterior part broad and rounded in outline, widest opposite legs II. Thoracic groove longitudinal.

Eyes: Eight. From above, both rows recurved. Ratios of the diameters of the eyes and of their distances apart: AM, 112; AL, 147; PM, 113; PL, 131; AM-AM, 113; AM-AL, 84; AM-PM, 97; PM-PM, 188; PM-PL, 135; L-L, 62; clypeus 148. Breadth of eye-group 0.60 mm.

Chelicerae: With boss. Strong and geniculate at the base with a posterior swelling also. Groove oblique and somewhat concave, especially the promargin. Ventral end of the promargin with two large conjoined teeth and one

small one. Retromargin with a row of eight teeth decreasing in size from the base of the fang.

Maxillae: Rather long, slightly converging, pointed in front.

Lip: Free, as wide as long and rounded anteriorly. About half the length of the maxillae.

Sternum: Length 0.89 mm, breadth 0.94 mm. Convex, almost circular but truncated anteriorly.

Palp: Tibia with a large rounded distally directed lobe on the retrolateral side and a very large pointed process on the prolateral side, curving dorsally. Cymbium with a rounded swollen body and slender distal extremity. As in Figure 2.

<i>Legs:</i>	I	IV	II	III	Palp
	3.71	3.41	3.38	2.94	1.58

	<i>Femur</i>	<i>Patella and Tibia</i>	<i>Metatarsus</i>	<i>Tarsus</i>	<i>Total</i>
Palp	1.08	1.07	....	0.82	2.97
I	1.75	2.27	1.48	0.88	6.38
II	1.71	2.25	1.57	0.89	6.42
III	1.59	1.73	1.36	0.83	5.51
IV	1.91	2.29	1.96	0.79	6.95

Tibial Index I	14.5	Tibial Index IV	10.8
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Legs slender and with slender spines. Three claws, the dorsal similar with 12 long pectinations, the ventral with three small ones. Tarsi



FIG. 2. *Swainsia armata*. Ventral, dorsal, and retrolateral views of the male palp.

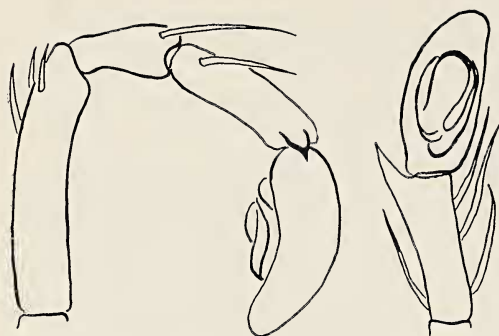


FIG. 3. *Clubiona upoluensis*. Ventral and retrolateral views of the male palp.

and metatarsi with a single dorsal row of trichobothria increasing in length distally.

Abdomen: Length 1.78 mm, breadth 1.19 mm. Colulus a broad lobe. Anterior spinnerets narrow and cylindrical, posterior spinnerets conspicuously long and slender, twice the length of the anterior ones.

CLUBIONIDAE

Clubiona upoluensis n. sp.

MALE: Collected by E. C. Zimmerman at Afamalu, Upolu, Samoa, vii-3-40. Length 8.04 mm. Pale brown all over, carapace slightly darker.

Carapace: Length 3.33 mm, breadth 2.40 mm. Smooth oval.

Eyes: Eight, posterior row straight, anterior row slightly recurved. Ratios of the diameters of the eyes and of their distances apart: AM, 161; AL, 221; PM, 173; PL, 200; AM-AM, 222; AM-AL, 178; AM-PM, 218; PM-PM, 435; PM-PL, 342; L-L, 160; clypeus, 95. Breadth of eye-group, 1.15 mm.

Chelicerae: Promargin of the groove with three teeth, the smallest nearest the fang, the largest in the middle, the third prolonged proximally as a ridge. Retromargin with two small teeth, one opposite the small promarginal one, the other nearer to the fang.

Maxillae: Long, constricted in the middle, wide and rounded distally.

Lip: Little more than half the length of the maxillae.

Sternum: Length 1.59 mm, breadth 1.08 mm. Smoothly oval with a broad concavity anteriorly.

Palp: As in Figure 3.

Legs:	I	IV	II	III	Palp
	3.29	3.18	3.07	2.24	0.90

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	1.09	1.13	....	0.87	3.19
I	3.01	4.57	2.44	0.93	10.95
II	2.86	3.99	2.42	0.95	10.22
III	1.23	2.49	2.07	0.66	6.45
IV	2.75	3.43	3.54	0.88	10.60

Tibial Index I	12.8	Tibial Index IV	8.2
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Metatarsi I and II with one proximal pair of spines, tibiae I and II with two pairs of spines and one prolateral-distal spine. Metatarsi and tibiae III and IV with numerous spines, and all femora with spines. Tarsi and metatarsi I and II with scopulae, also a very slight one on tibia I.

Abdomen: Length 4.51 mm, breadth 1.96 mm. Spinnerets long, anterior pair much the stoutest.

A larger and more slender spider than *C. alveolata*, considerably larger than *C. samoensis*, as well as differing in details.

Clubiona zimmermani n. sp.

MALE: Collected by E. C. Zimmerman at Fagatogo, Tutuila, Samoa, at 900', viii-25-40. Length 5.49 mm. Pale brown, carapace and mouthparts slightly darker.

Carapace: Length 2.60 mm, breadth 1.86 mm. Smoothly oval. One spine above PME and ALE, two above PLE.

Eyes: Posterior row straight, anterior row very slightly recurved. Ratios of the diameters of the eyes and of their distances apart: AM, 192; AL, 188; PM, 167; PL, 187; AM-AM, 173; AM-AL, 119; AM-PM, 139; PM-PM, 400; PM-PL, 277; L-L, 108; clypeus, 80. Breadth of eye-group 1.01 mm.

Chelicerae: Smooth and tapering. A low but distinct ridge runs proximally from the prolateral side of the base of the fang. Groove oblique, three prolateral teeth at the ventral end, the middle one the largest. Three retro-

lateral teeth opposite to them, the one nearest the fang being the largest. A sharp retrolateral tooth close to the base of the fang.

Maxillae: Rounded and expanded distally, the median corner truncated.

Lip: Slightly more than half the length of the maxillae. Concave distally.

Sternum: Length 1.37 mm, breadth 0.94 mm. Convex.

Palp: Spines: femur, one dorsal and four distal; patella, three dorsal; tibia, two pairs prolateral-dorsal. Tibia with a long slender retrolateral apophysis, about half the length of the tarsus, with a short one ventral to its base. Details as in Figure 4.

<i>Legs</i> :	IV	I	II	III	Palp
	3.0	2.4	....	1.8	0.8
	<i>Patella and Tibia</i>				
	<i>Femur</i>	<i>Metatarsus</i>	<i>Tarsus</i>	<i>Total</i>	
Palp	0.74	0.66	....	0.68	2.08
I	1.81	2.68	1.19	0.65	6.33
II	1.90	2.66	....	....	....
III	1.42	1.71	1.11	0.42	4.66
IV	2.28	2.61	2.21	0.65	7.75
Tibial Index I	10.3	Tibial Index IV	8.5		

Scopulae on tarsi, metatarsi and very slightly on tibiae I and II. Legs I and II have two pairs of spines on the tibiae, and three dorsal and one prolateral-distal spine on the femora.

Abdomen: Length 2.94 mm, breadth 1.37 mm. Stout bristles anterodorsally and a few above the spinnerets.

Differs from *C. alveolata* in the large tibial apophysis on the palp and the absence of hairs on the chelicerae. The ridge on the chelicerae is much smaller and more oblique than that of *C. samoensis*, whose chelicerae are also hairy.

SALTICIDAE

Flacilla kraussi n. sp.

MALE: Aitutaki. Collected by N. L. H. Krauss in 1960. Length 4.79 mm. Carapace brown, darker round the edge and especially in the

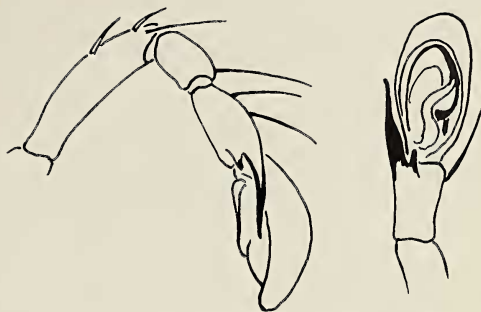


FIG. 4. *Clubiona zimmermani*. Ventral and retrolateral views of male palp.

ocular area where the eyes are surrounded by black. Chelicerae, maxillae, lip, and legs I, dark brown. Palps, remaining legs, sternum, and abdomen pale brown. The dorsal surface of the abdomen with a darker ill-defined pattern consisting of a dark mark over the heart, anterior dorsolateral patches and posteriorly three transverse bands somewhat interrupted and irregular near the middle line.

Carapace: Length 1.95 mm, breadth 1.37 mm. Flat and rectangular in appearance. Anteriorly directed hairs around the eyes and flattened pale ones within the ocular quadrangle.

Eyes: Anterior row recurved. Ratios of the diameters of the eyes and of their distances apart: AM, 157; AL, 62; PM, 40; PL, 74; AM-AM, 18; AM-AL, 39; AL-PM, 126; PM-PL, 102; PL-PL, 445. AM in contact with the margin of the carapace. Ratios of the dimensions of the ocular quadrangle, including the eyes: AL-AL, 517; AL-PL, 388; PL-PL, 545.

Chelicerae: Small, with oblique groove. On the ventral promargin are two teeth, the one nearer to the fang being the larger. One retromarginal tooth opposite to this and of equal size.

Maxillae: Long.
Lip: More than half the length of the maxillae, narrow, rounded anteriorly.

Sternum: Length 0.95 mm, breadth 0.55 mm. Convex, narrow anteriorly between the large coxae I and with a slender posterior point between coxae IV.

Palp: Well-developed tibial apophysis. As in Figure 5.

Legs:	I	IV	III	II	Palp																																										
	2.31	1.69	1.38	1.32	0.71																																										
	<table> <tr> <th></th><th>Femur</th><th>Patella and Tibia</th><th>Metatarsus</th><th>Tarsus</th><th>Total</th></tr> <tr> <td>Palp</td><td>0.64</td><td>0.32</td><td>....</td><td>0.46</td><td>1.42</td></tr> <tr> <td>I</td><td>1.36</td><td>2.16</td><td>0.71</td><td>0.38</td><td>4.61</td></tr> <tr> <td>II</td><td>0.91</td><td>1.02</td><td>0.45</td><td>0.27</td><td>2.65</td></tr> <tr> <td>III</td><td>0.89</td><td>0.98</td><td>0.53</td><td>0.35</td><td>2.75</td></tr> <tr> <td>IV</td><td>1.09</td><td>1.32</td><td>0.59</td><td>0.38</td><td>3.38</td></tr> <tr> <td>Tibial Index I</td><td>5.9</td><td></td><td>Tibial Index IV</td><td>6.6</td><td></td></tr> </table>						Femur	Patella and Tibia	Metatarsus	Tarsus	Total	Palp	0.64	0.32	0.46	1.42	I	1.36	2.16	0.71	0.38	4.61	II	0.91	1.02	0.45	0.27	2.65	III	0.89	0.98	0.53	0.35	2.75	IV	1.09	1.32	0.59	0.38	3.38	Tibial Index I	5.9		Tibial Index IV	6.6	
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IV	1.09	1.32	0.59	0.38	3.38																																										
Tibial Index I	5.9		Tibial Index IV	6.6																																											

Leg I very large and stout, tarsi and metatarsi being much narrower. All joints except the tarsi with a small number of long outstanding hairs. Metatarsus I with a short stout prolateral-ventral spine at the distal end, and a small retrolateral-ventral one also. There is also a small prolateral-ventral spine about the middle of metatarsus I. Tibia I with a short stout prolateral-ventral spine a short distance from the distal end. There is a smaller ventral spine close to it and a minute one about one-third of the length of the tibia from the proximal end. No other spines on leg I, and those on the other legs slender, not very numerous and of the usual type. No scopulae.

Abdomen: Length 2.69 mm, breadth 1.42 mm. Truncated in front, narrow behind. This specimen is doubtfully placed in the genus *Flacilla*.

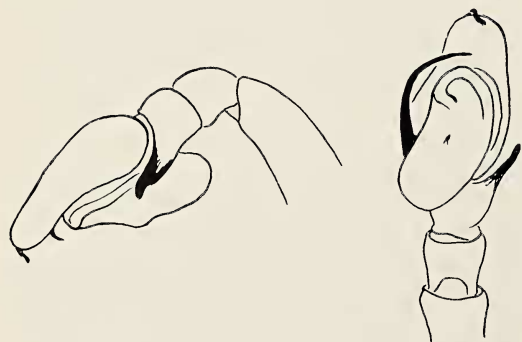


FIG. 5. *Flacilla kraussi*. Ventral and retrolateral views of the male palp.

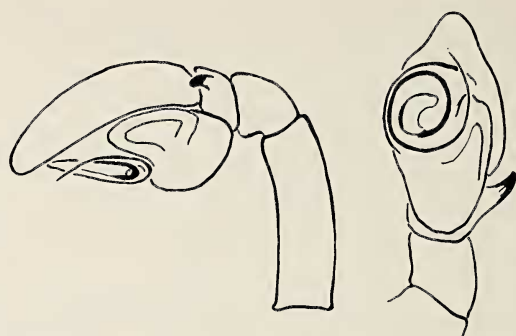


FIG. 6. *Mollicia pusilla*. Ventral and retrolateral views of the male palp.

Mollicia pusilla Strand

A specimen collected at Amouli, Tutuila, Samoa, by E. C. Zimmerman viii-2-40 is attributed to this species described from Tahiti.

MALE: Length 3.85 mm. Chestnut, paler in the ocular area with an oval pale mark behind. Black around the eyes. Remainder pale brown, the abdomen with two poorly defined dorso-lateral darker bands.

Carapace: Length 1.94 mm, breadth 1.46 mm. Slightly convex in the ocular area, sloping steeply down behind. General impression high and short.

Eyes: Ratios of the diameters of the eyes and of their distances apart: AM, 228; AL, 143; PM, 27; PL, 113; AM-AM, 18; AM-AL, 25; AL-PM, 165; PM-PL, 103; PL-PL, 535; clypeus, 45. Ratios of the dimensions of the ocular quadrangle, including the eyes: AL-AL, 734; AL-PL, 482; PL-PL, 685. From above anterior row of eyes recurved. Breadth of eye-group 1.45 mm.

Chelicerae: Short and slightly swollen, fang short. Two teeth on the promargin of the groove and one larger one on the retromargin.

Maxillae: Broad and semicircular distally.

Lip: Lozenge-shaped, about half the length of the maxillae.

Sternum: Length 0.87 mm, breadth 0.69 mm. Convex.

Palp: As in Figure 6.

Legs:	III	IV	I	II	Palp
	2.36	2.17	1.88	1.76	0.77

Legs:	IV	I	II	III	Palp
	1.5	1.5	1.2	1.1	0.7

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.50	0.35	....	0.65	1.50
I	1.19	1.32	0.57	0.56	3.64
II	1.17	1.25	0.62	0.39	3.43
III	1.60	1.45	1.07	0.49	4.61
IV	1.47	1.43	0.78	0.54	4.22
Tibial Index I	4.9		Tibial Index IV	5.8	

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.25	0.27	....	0.26	0.78
I	0.45	0.63	0.36	0.10	1.54
II	0.32	0.45	0.26	0.18	1.21
III	0.32	0.37	0.30	0.19	1.18
IV	0.46	0.55	0.36	0.24	1.61
Tibial Index I	7.4		Tibial Index IV	7.4	

Details of legs as described by Berland.

All parts of the legs, except the tarsi, with spines including dorsal ones on tibia IV. Tarsi without scopulae.

Abdomen: Length 1.87 mm, breadth 1.17 mm.

Rarabu nitida Berland

This genus and species were described by Berland (1929) from a single male from Malololei, Upolu, Samoa. In the Otago Museum collection are four females and one male collected from moss in the rain forest at Afiamalu, very close to Malololei. The male is smaller than Berland's specimen and differs in color and in slight details, but it seems to belong to the same species. Its measurements and brief description are given here for comparison with those of the female.

MALE: Length 1.90 mm. General color pale brown, the margin of the carapace dark, the ocular area almost black, the abdomen with a broad anterior transverse band followed by four narrow ones. This differs from Berland's specimen, which was dark brown with lighter parts on the legs.

Carapace: Length 1.02 mm, breadth 0.63 mm.

Eyes: Ratios of the diameters of the eyes and of their distances apart: AM, 118; AL, 61; PM, 27; PL, 71; AL-PM, 100; PM-PL, 92; PM-PL, 273. Anterior eyes in contact, row strongly recurved. This is essentially as described by Berland.

Palp: As in Figure 7 and as figured by Berland.

Abdomen: Length 0.85 mm, breadth 0.55 mm. The chitinous plates above and below, mentioned by Berland, are scarcely perceptible.

FEMALE ALLOTYPE: Length 2.34 mm. Color as in male.

Carapace: Length 1.25 mm, breadth 0.76 mm. As in male.

Eyes: Ratios of the diameters of the eyes and of their distances apart: AM, 134; AL, 95; PM, 33; PL, 80; AL-PM, 132; PM-PL, 105; PL-PL, 330. Anterior eyes in contact.

Chelicerae, maxillae, and lip: As in male.

Sternum: Length 0.52 mm, breadth 0.39 mm.

Legs:	IV	I	III	II	Palp
	1.8	1.6	1.3	1.1	0.7

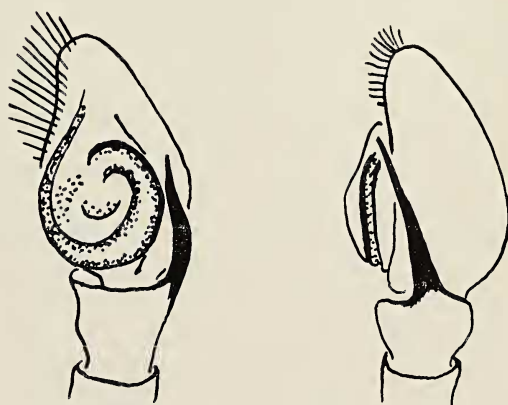


FIG. 7. *Rarabu nitida*. Ventral and retrolateral views of the male palp.



FIG. 8. *Rarabu nitida*. Epigynum of the female.

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.36	0.34	....	0.28	0.98
I	0.65	0.85	0.46	0.13	2.09
II	0.50	0.53	0.27	0.17	1.47
III	0.44	0.52	0.43	0.25	1.64
IV	0.68	0.80	0.59	0.20	2.27
Tibial Index I	9.6		Tibial Index IV	9.4	

Abdomen: Length 1.18 mm, breadth 0.87 mm. Spinnerets terminal. No noticeable chitinous plates. Epigynum as in Figure 8.

Trite longipalpis Marples

FEMALE ALLOTYPE: Afiamalu, Upolu, Samoa. 2,200', collected by E. C. Zimmerman vi-14-40. Length 7.72 mm. Color similar to male.

Carapace: Length 3.77 mm, breadth 2.85 mm.

Eyes: Ratios of the diameters of the eyes and of their distances apart: AM, 221; AL, 125; PM, 23; PL, 118; AM-AM, 27; AM-AL, 45; AL-PM, 150; PM-PM, 654; PM-PL, 144; PL-PL, 635. Breadth of eye-group 2.22 mm.

Chelicerae: Simpler and straighter than those of the male. Promargin of the groove with two teeth as in the male. Retromargin with five teeth, the largest nearest to the fang and not separated from it by a concavity. Fang without the flange present in the male.

Maxillae and lip: As in male, but the pit in the maxilla shallower.

Sternum: Length 1.59 mm, breadth 0.89 mm.

Palp: Long. Patella, tibia, and tarsus flattened dorsally, where they are somewhat darker in color and fringed with light hairs.

Legs:	I	IV	II	III	Palp
	1.88	1.76	1.49	1.40	0.86

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	1.18	1.29	....	0.79	3.26
I	2.06	3.19	1.04	0.79	7.08
II	1.74	2.34	0.91	0.60	5.59
III	1.61	1.90	1.08	0.71	5.30
IV	2.19	2.46	1.47	0.54	6.66
Tibial Index I	5.9		Tibial Index IV	6.6	

Abdomen: Length 4.41 mm, breadth 2.18 mm. Epigynum as in Figure 9.

MALE: In the males from Samoa the carapace, mouthparts, palps, and leg I are much paler chestnut-colored than in the type from Tonga. They correspond, however, in structure. A correction to the measurements of the type are the tibial indices, which should be 8.8 and 7.2.

Salticid

A single mature male from Jarvis Island does not seem to belong to any species known from the Pacific area. It almost certainly must have been accidentally introduced by man and a few details and figures of the palps are given in the hope that it may be recognized.

MALE: Length 4.9 mm. General color dark chestnut with very little abdominal pattern. Carapace broad and high. Chelicerae with two prolateral teeth, the nearer the fang being the larger, and one retrolateral tooth deeply divided



FIG. 9. *Trite longipalpis*. Epigynum of the female.

into two equal cusps. Palps long and slender with a small tibial apophysis and short embolus, as in Figure 10. Very long thin white hairs along the prolateral side of the tibia and to a lesser extent on the patella.

THERIDIIDAE

Theridion adamsoni Berland

MALE ALLOTYPE: Tapatapao, Upolu, Samoa. Collected by E. C. Zimmerman, 19/7/40. Female described from Tahiti. Length 2.71 mm. Carapace, sternum, legs, and mouthparts light brown. Legs with faint annulations, strongest on IV, scarcely perceptible on I. Abdomen pale greyish brown, the upper surface with stout bristles each arising from a conspicuous dark base. Posterior half of dorsal surface with pairs of irregular dark marks extending back as far as the spinnerets. Single pair of dark marks near the anterior end.

Carapace: Length 1.31 mm, breadth 1.09 mm. Groove longitudinal. Upper surface sloping up steeply to the ocular area.

Eyes: Eight. AM dark. From in front the anterior row straight, from above the posterior row straight. Ratios of the diameters of the eyes and of their distances apart: AM, 200; AL, 131; PM, 142; PL, 129; AM-AM, 128; AM-AL, 87; AM-PM, 145; PM-PM, 151; PM-PL, 130; L-L, 18; clypeus, 264. Breadth of eye-group 0.62 mm.

Chelicerae: Long and tapering, groove unarmed and very oblique.

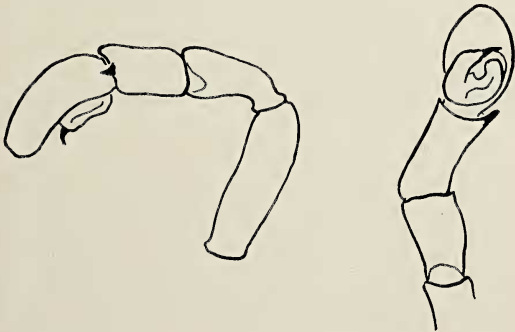


FIG. 10. Unidentified salticid. Ventral and retrolateral views of the male palp.



FIG. 11. *Theridion adamsoni*. Retrolateral view of the male palp.

Maxillae: About twice the length of the lip and meeting in front of it.

Lip: As wide as long, slightly concave distally.

Sternum: Length 0.67 mm, breadth 0.74 mm. Heart-shaped, rebordered, slightly indented opposite the legs.

Palp: As in Figure 11.

Legs:	I	II	IV	III	Palp
	6.77	5.16	3.45	3.30	0.97

	Femur	Patella and Tibia	Metatarsus	Tarsus	Total
Palp	0.58	0.37	----	0.32	1.27
I	2.65	3.31	2.32	0.56	8.84
II	2.07	2.45	1.76	0.48	6.76
III	1.44	1.08	1.31	0.49	4.32
IV	1.36	1.41	1.43	0.46	4.66
Tibial Index I	21.8		Tibial Index IV	10.7	

Abdomen: Length 1.48 mm, breadth 1.06 mm. Spinnerets in conspicuous group, anterior about twice the size of the posterior, median minute.

EPEIRIDAE

Epeira pogisa Marples

A single female collected by E. C. Zimmerman, Afona Trail, Tutuila, Samoa, at 200' on 1/8/40, is doubtfully assigned to this species. The epigynum and cheliceral teeth are similar. The present specimen has a length of 9.5 mm compared with 5.28 mm for the type, and the abdomen, instead of being dark, is pale with a dark trident marking anteriorly, the central branch over the heart, the lateral ones continued

irregularly back to meet behind. A band of oblique dark marks on each side.

SUMMARY

Additions are made to the lists of spiders known from various Pacific islands, and five new species and one new genus are erected: *Tetrablemma samoensis*, Tetrablemmidae from Samoa; *Clubiona upoluensis* and *C. zimmermani*, Clubionidae, from Samoa; *Flacilla kraussi*, Salticidae, from Aitutaki; *Swainsia armata* gen. et sp. nov., Agelenidae, from Swains Island.

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